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NEW, RARE OR LITTLE KNOWN SCOMBROIDS, NO. 3.

BY HENRY W. FOWLER.

CHLOROSCOMBRINÆ.

Chloroscombrus hesperius sp. nov. Fig. 1.

Head 4; depth $2\frac{1}{4}$; D. I, VIII-I, 26; A. II-I, 25; P. II, 17; V. I, 5; scales 98? (squamation injured) in lateral line to base of caudal; depth of head, over middle of orbit, $1\frac{1}{10}$ in its length; width of head $2\frac{1}{2}$; mandible 2; third dorsal spine $2\frac{9}{10}$; second dorsal ray 2; first anal ray $2\frac{9}{10}$; ventral $2\frac{1}{2}$; snout $3\frac{2}{3}$ in head, measured from tip of upper jaw; eye $2\frac{4}{5}$; maxillary $2\frac{1}{4}$; interorbital space $3\frac{2}{3}$; least depth of caudal peduncle $5\frac{1}{8}$; upper caudal lobe $3\frac{1}{2}$ in head and trunk; pectoral $2\frac{3}{8}$.

Body rather shorter than in *C. chrysurus*, strongly compressed,

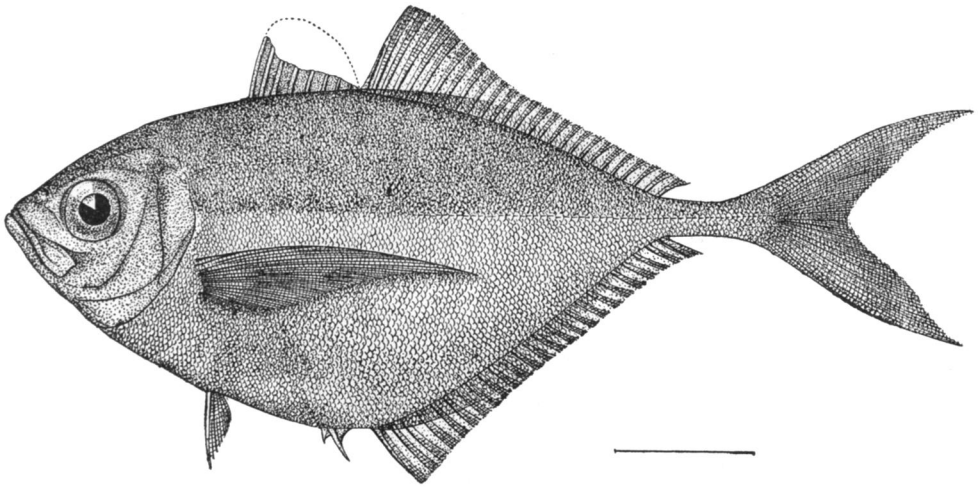


Fig. 1.—*Chloroscombrus hesperius* Fowler.

ovoid, lower profile much more convex than upper and greatest depth at base of spinous anal. Caudal peduncle long, slender, compressed, and its least depth about 3 in its length.

Head deep, compressed. Snout short, forming obtuse profile, upper surface convex and upper jaw little produced. Eye rather large,

circular, and a little high and anterior. Adipose eyelid broad posteriorly, and covering a good portion of iris. Mouth obliquely vertical, rather small, and mandible well protruded. Maxillary reaching opposite front margin of eye, and its distal expanded extremity a trifle less than pupil or about $\frac{3}{4}$ of orbit. Teeth minute, in bands in jaws, and also present on vomer, palatines and tongue. Tongue long, rather narrow, with rounded tip, and free in front. Lips thin, except lower on side of mandible. Interorbital space elevated and with a median elevated trenchant keel extending to occiput. Nostrils adjoining, near upper front rim of orbit and posterior larger.

Gill-opening extending forward about opposite posterior nostril. Rakers 10+33, slender, compressed, and longest $\frac{3}{8}$ of orbit. Filaments about $\frac{4}{7}$ length of longest rakers, and pseudobranchiæ about same size. Isthmus narrowly compressed, and its edge not trenchant.

Scales small, cycloid, and forming convex series bulging posteriorly over costal region. A few small scales on occipital region, postocular region, and on opercle above, head otherwise naked. Spinous dorsal and anal depressible in narrow scaly sheaths. Soft dorsal and anal anteriorly with basal scaly sheaths and rays more or less depressible within. Lateral line convex anteriorly, its bulge about equal to $1\frac{1}{2}$ in straight portion, and no keel.

Spinous dorsal small, inserted nearly midway between tips of upper jaw and pectoral, and fourth or fifth spine probably longest (damaged). Soft dorsal inserted nearly midway between front rim of orbit and base of last dorsal ray, a little in front of straight part of lateral line, and first few rays elongated a little. Soft anal similar, inserted a little in advance of soft dorsal. Origin of spinous anal about last third in space between origin of ventral and that of soft anal, second spine probably a little longer (first damaged). Caudal rather large, lobes slender, pointed, and upper much longer. Pectoral long, slender, and reaching about opposite first third of base of anal. Ventral inserted a little behind origin of pectoral, small, both fins depressible in a groove extending to and containing vent, and when depressed thus reaching $\frac{3}{4}$ of space to spinous anal.

Color in alcohol more or less silvery, and back above brownish. A small dull or pale brown spot on upper edge of opercle. Head pale brown above. Eye dull brassy. Fins pale brownish, spinous dorsal and upper anterior dorsal rays with a little brownish. A blackish blotch at base of upper caudal lobe.

Length $6\frac{3}{4}$ inches.

Type No. 11,198, A. N. S. P. West Africa. Dr. H. E. Savage.

This species is closely related to *Scomber chloris* Bloch, with which it may possibly prove identical. However, that form, if the original figure is to be trusted, is very close to *Scomber chrysurus* Linnæus. It will be seen to differ from *C. chrysurus* in the slightly deeper form, larger eye, more anterior insertion of the anal, and longer pectoral. The gill-rakers are about the same.

(*Εσπέριος*, western, with reference to the type locality.)

TRACHINOTINÆ.

GLAUCUS Walbaum.

Klein, in Walbaum, *Pet. Arted. Gen. Pisc.*, III, 1792, p. 585, with *Scomber amia* Linnæus as type, has priority over *Hypacantus* Rafinesque, *Carat. Alcan. Nuov. Gen. Spec. An. Piant. Sicilia*, 1810 (April 1st), p. 43 (= *Hypacanthus* = *Hypacantha* = *Hypodis* = *Hypodys* Rafinesque = *Lichia* Cuvier = *Porthmeus* Valenciennes).

Glaucus amia (Linnæus) examined.

CAMPOGRAMMA Regan.

Campogramma Regan is distinct, as an examination of *Campogramma glaucus* (Linnæus) shows.

TRACHINOTUS Lacépède.

PAMPANO subgen. nov.

Type *Chaetodon glaucus* Bloch.

Anterior rays of dorsal and anal prolonged so that they form long falcate lobes. Caudal long and triangular. Side with several dark transverse vertical bars, at least above. *Trachinotus glaucus* (Bloch) examined.

(*Pámpano* [Spanish], a common vernacular for the fishes of this genus and mostly written *Pompano*.)

Subgenus TRACHINOTUS Lacépède.

T. ovatus (Linnæus), *T. falcatus* (Linnæus), *T. goreensis* Cuvier and *T. carolinus* (Linnæus) examined.

STROMATEIDÆ.

STROMATEINÆ.

Subgenus STROMATEUS Linnæus.¹

Stromateus brasiliensis sp. nov. Fig. 2.

Head $4\frac{1}{3}$; depth $2\frac{1}{5}$; D. V, 40; A. V, 37; P. II, 18; width of head $1\frac{9}{10}$ in its length; snout $3\frac{3}{5}$; eye $4\frac{3}{4}$; maxillary $3\frac{5}{8}$; interorbital space $2\frac{2}{5}$:

¹ *Stromateus fiatola* Linnæus examined.

least depth of caudal peduncle $2\frac{1}{3}$; pectoral (damaged), a little less than head; upper lobe of caudal (damaged) about $3\frac{1}{2}$ in head and trunk; about 125? scales in a lateral series from gill-opening below lateral line to base of caudal.

Body ovate, deep, compressed, and greatest depth about origins of rayed dorsal and anal. Back rather trenchant before dorsal. Caudal peduncle compressed, its least depth about $\frac{2}{3}$ of its length.

Head deep, compressed, blunt in front, profiles steep, and upper a little concave in front. Snout blunt, convex and profile in front nearly vertical. Eye rather small, circular, a little low, and posterior margin

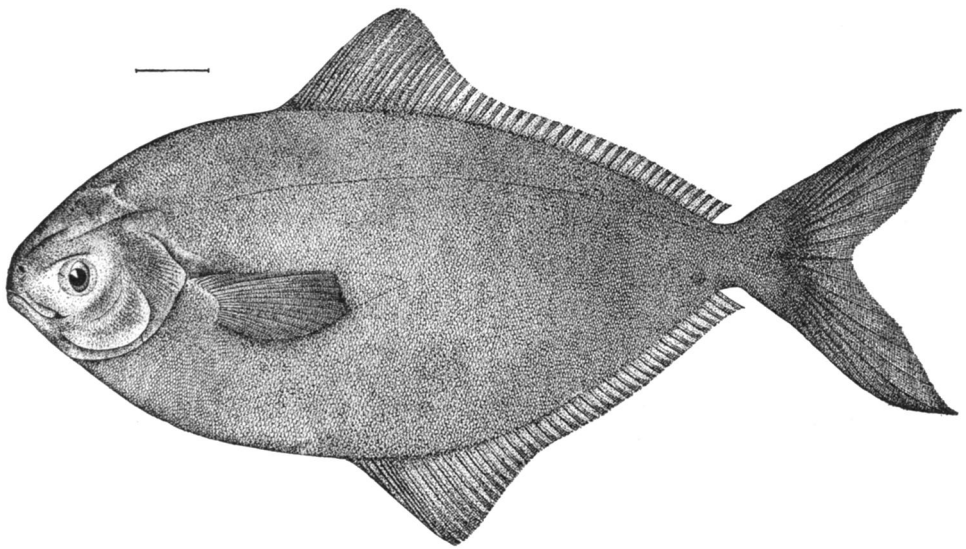


Fig. 2.—*Stromateus brasiliensis* Fowler.

about midway in length of head. Adipose eyelid well developed, and concealing a good portion of eye. Mouth a little inclined, small, and mandible hardly protruded in front. Maxillary not quite reaching front rim of orbit, and distally expanded till about equal to pupil. Teeth minute, uniserial, and forming a rather weak cutting edge. Palatines with minute asperities. Vomer edentulous. Tongue smooth, broad, rounded, and free in front. Nostrils adjoining, a little nearer front of snout than front margin of eye, and posterior larger. Interorbital space elevated, trenchant, a keel beginning at the internasal region. Preopercle broad and with radiating flutings. Opercle striate.

Gill-opening extending forward about opposite front margin of eye. Rakers 5+13, pointed, longest about $\frac{2}{3}$ of longest filaments which are $\frac{4}{5}$ of orbit. Pseudobranchiæ a trifle longer than longest raker. Isthmus rounded.

Scales small, and extending well out on most of fins, almost entirely on dorsals and anals where they are greatly reduced and crowded. Head naked except cheek and opercle. Lateral line damaged, convex at least anteriorly.

Dorsal apparently over middle of pectoral, spines graduated to last which is longest though not as high as longest anterior rays. Anals similar though origin of spinous well posterior, a little before end of pectoral. Only first 7 or 8 rays of rayed dorsal and anal a little longer than others. Caudal large, forked, and lobes rather broad. Pectoral broad, its origin a little above lower rim of orbit. Anus placed nearly opposite origin of spinous dorsal.

Color in alcohol pale brown, mostly uniform, or the back only a trifle darker and marked with indistinct traces of numerous crowded slightly darker or grayish spots. Fins pale brown, pectoral a trifle darker. Iris dull brassy.

Length $13\frac{3}{4}$ inches.

Type No. 11,354, A. N. S. P. Rio Grande do Sul, Brazil. Mus. Comp. Zoöl. Cambr., Mass.

One example which does not agree with Gay's figure of *Stromateus maculatus*.² This is very poor, as no squamation whatever is indicated, the fins are naked, also the head, there is no adipose eyelid, opercle and preopercle without striæ, and the spots are greenish-golden, the lower ones brighter. The dorsal shows VI, 38, and the anal III, 32. Jenyn's Chiloe example³ had D. VII, 41, and A. V, 50, and the one from Port St. Julien in Central Patagonia is possibly identical with *S. brasiliensis*. The original account of *S. maculatus* by Valenciennes states that the spots are yellow.

(*Brasiliensis*, of Brazil.)⁴

PTERORHOMBUS subgen. nov.

Type *Fiatola fasciata* Risso.

Fiatola Risso, Hist. Nat. Eur. Merid., III, 1826, p. 289 (*fasciata*). (Not of Cuvier.)

Small ventrals present. *Stromateus fasciata* (Risso) examined.

² *Atl. Hist. Chile*, Zool., 1854, "lam 3bis," fig. 1.

³ *Zool. Voy. Beagle*, IV, Fish, 1842, p. 74.

⁴ *Hist. Nat. Poiss.*, IX, 1833, p. 296.

(*Πτερόν*, fin, with reference to ventral; *ῥόμβος*, *Rhombus*, a rhomb or diamond, and formerly applied to species of *Seserinus*, *Palometa* and *Poronotus*.)

SESERINUS Quoy and Gaimard.

Seserinus Cuvier, in Quoy and Gaimard, Voyage de l'Uranie, Zool., Jan.-Mar., 1825, p. 384 (*xanthurus*), has priority over *Peprilus* Cuvier, Règne Animal, Ed. II, II, 1829, p. 214 (*longipennis* = *paru*), now in use. Cuvier's account in l.c., Ed. I, II, 1817, p. 342 (*alepidotus* = *paru*) cannot be used on account of its vernacular form. *Seserinus xanthurus* Quoy and Gaimard examined.

NOMEIDÆ.

Psenes chapmani sp. nov. Fig. 3.

Head 3; depth $1\frac{7}{8}$; D. X, I, 23; A. III, 25; P. II, 17; V. I, 5; scales 60 in lateral line to base of caudal; 9 scales vertically between origin of soft dorsal and lateral line, and about 25 vertically between latter and origin of soft anal; width of head 2 in its length; depth of head over middle of eye about equal to its length; snout $3\frac{3}{4}$; eye 3; maxillary 3; interorbital space 3; least depth of caudal peduncle .3; pectoral $1\frac{1}{2}$; ventral $1\frac{3}{4}$.

Body deep, compressed, rather ovoid, profiles similar, and greatest depth about origin of soft anal. Caudal peduncle compressed, and its least depth about $1\frac{1}{4}$ in its length.

Head deep, compressed, profiles steep, and similar, blunt in front. Snout short, blunt, convex, upper jaw but slightly projecting. Eye rather large, circular, anterior, and its lower margin about midway in depth of head. Mouth small, jaws about even, and maxillary extending obliquely down barely opposite front margin of orbit. Teeth in jaws uniserial, rather pronounced, well separated and sharp. No teeth on roof of mouth. Tongue rounded, and free in front. Nostrils small, very close together, and well in front of eye above. Interorbital space convexly elevated.

Gill-opening extending forward about opposite front rim of orbit. Rakers 11 + 20, clavate, a little shorter than filaments which are about 2 in orbit. Pseudobranchiæ nearly as large as filaments.

Scales small, those above lateral line forming series parallel with its course, and those below forming horizontal longitudinal series. Except interorbital space, supraocular region, nasal region, snout, mandible, and branchiostegal region, head is covered with scales, those on middle of cheek and opercle largest. About 7 series on cheek. Scales in front of spinous dorsal small and crowded. Vertical fins

almost entirely scaled over most of basal regions which form sheaths for spinous dorsal and anal and also rayed dorsal and anal at least anteriorly. Only ends of caudal lobes naked. Scales on bases of these fins also small and crowded. Base of pectoral scaly. Ventral with innermost ray united to abdomen by a membrane and both fins depressible in a groove. Lateral line curved similarly with profile of back, also approaching it more closely posteriorly, and extending a little above middle of side of caudal peduncle. Lateral line not extending on base of caudal and tubes simple.

Spinous dorsal inserted a trifle in advance of origin of pectoral, spines flexible, and graduated to fourth which is longest. Soft dorsal

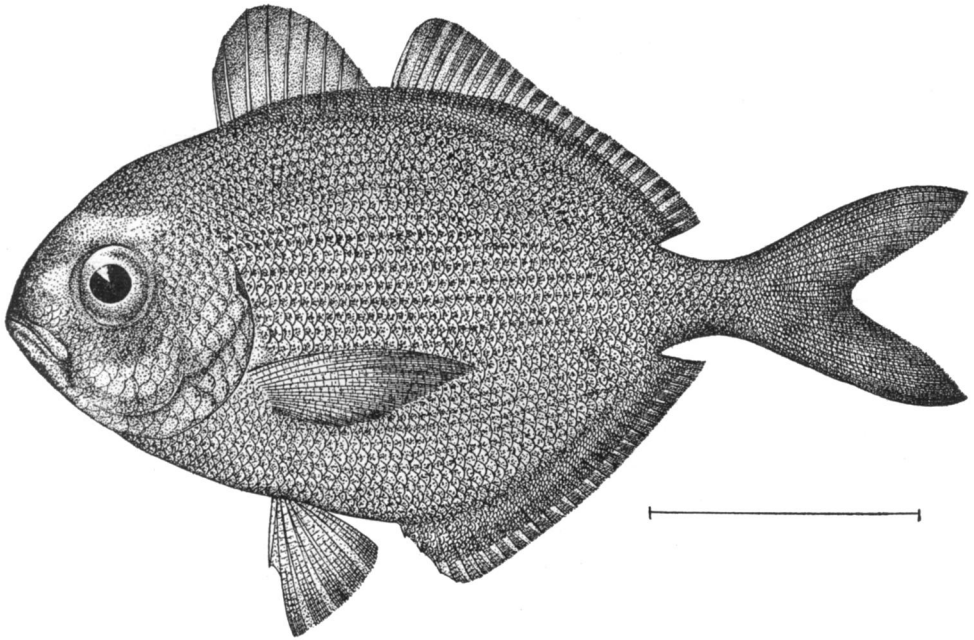


Fig. 3.—*Psenes chapmani* Fowler.

inserted a little nearer tip of snout than base of caudal or about over middle of pectoral, and fin a little higher anteriorly. Anal similar, spines graduated to third which is longest, and rayed fin inserted perhaps a trifle in advance of rayed dorsal. Caudal forked, lobes rather long and pointed. Pectoral broad, hardly reaching half way to tip of last anal ray. Ventral inserted a little behind origin of pectoral, and reaching second anal spine. Anus in ventral groove before tip of ventral fin.

Color in alcohol rich warm brown, lower surface paler, evidently silvery in life. Along each series of scales on side of body a narrow streak or line of darker color than general body-color. Above lateral line these also follow series of scales parallel with it, and below it they are also horizontal. Lower side of head including cheek and opercle spotted or dotted with brown. Spinous dorsal and ventrals dusky-brown. Rayed dorsal with more or less pale dusky-brown on its outer portion. Caudal and anal paler. Pectoral pale brownish. Inside of mouth pale. Iris brassy. Peritoneum whitish.

Length $3\frac{5}{8}$ inches.

Type No. 14,621, A. N. S. P. Taken on the surface of the open Atlantic in Lat. $24^{\circ} 21' N.$, Long. $34^{\circ} 32' W.$ (northwest of Cape de Verde Islands). Dr. W. H. Jones. Also seven paratypes with same data. The very young differ in having the body marked with large blotches, no longitudinal lines on side, and lower parts of head together with thorax marked with numerous brown spots. Larger example with 28 rays.

Young examples also from the open Atlantic's surface in Lat. $23^{\circ} 53' N.$, Long. $53^{\circ} 06' W.$ (northwest of the Lesser Antilles). Another also from the Atlantic in the Saragossa Sea. All from Dr. William H. Jones.

The East Indian form ⁵ needs comparison. *Psenes guttatus* apparently differs in coloration, especially the spotted thorax and lower surface of the head. None of my examples show a trace of the bluish bar indicated by Valenciennes. *Psenes edwardsii* Eigenmann ⁶ has a little different radial formula and about 140 scales in the lateral line.

(Dedicated to Dr. Henry C. Chapman, Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, who has contributed many valuable additions to the ichthyological collections of the Academy.)

LEPODIDÆ fam. nom. nov.

LEPODUS Rafinesque.

Carat. Alcum. Gen. Spec. An. Piant. Sicilia, 1810, p. 53 (*saragus = raii*) is to be used, as *Brama* Klein, in Walbaum, *Pet. Arted. Gen. Pisc.*, III, 1792, p. 586, with *Cyprinus brama* Linnæus as type, preoccupies *Brama* Schneider, *Syst. Ichth.*, Bloch, 1801, p. 98, based on *Sparus raii* Bloch. The Pomfret, *Lepodus raii* (Bloch), examined.

⁵ *Hist. Nat. Poiss.*, IX, 1833, p. 193, Pl. 265.

⁶ *Bull. U. S. Fish. Comm.*, XXI, 1901 (1902), p. 35, fig. From under a medusa, 30 miles south of Newport, Rhode Island.

CORYPHÆNIDÆ.

Coryphæna equisetis Linnæus is of perfectly correct form, and not to be emended to *C. equisetis* as some writers seem to suppose. Further, it is not a misprint for the latter but simply a different form of the same. A small example, 25 mm. in length, from between the Cape de Verde Islands and Montevideo (Uruguay), examined.

PEMPHERIDÆ.**PEMPHERIS** Cuvier.

PRIACANTHOPSIS subgen. nov.

Type *Pempheris mülleri* Poey.

Anal rays 25 to 32. *Pempheris mülleri* Poey examined.

(*Πρίων*, saw; *ἄκανθα*, spine; *ὄψις*, appearance. So named as these fishes resemble the young of *Priacanthus*.)

This paper concludes the series.